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(12) **United States Patent**
Shue et al.(10) **Patent No.:** US 7,906,489 B2
(45) **Date of Patent:** Mar. 15, 2011(54) **18-MEMBERED MACROCYCLES AND ANALOGS THEREOF**(75) Inventors: **Youe-Kong Shue**, Carlsbad, CA (US); **Chan-Kou Hwang**, San Diego, CA (US); **Yu-Hung Chiu**, San Diego, CA (US); **Alex Romero**, San Diego, CA (US); **Farah Babakhani**, San Diego, CA (US); **Pamela Sears**, San Diego, CA (US); **Franklin Okumu**, Oakland, CA (US)(73) Assignee: **Optimer Pharmaceuticals, Inc.**, San Diego, CA (US)

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A61K 31/70 (2006.01)(52) **U.S. Cl.** **514/28; 514/867**(58) **Field of Classification Search** **514/28; 514/867**

See application file for complete search history.

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Primary Examiner — Shaojia Anna Jiang*Assistant Examiner* — Scarlett Goon(74) *Attorney, Agent, or Firm* — Morgan Lewis & Bockius LLP(57) **ABSTRACT**The present invention relates generally to the 18-membered macrocyclic antimicrobial agents called Tiacumicins, specifically, OPT-80 (which is composed almost entirely of the R-Tiacumicin B), pharmaceutical compositions comprising OPT-80, and methods using OPT-80. In particular, this compound is a potent drug for the treatment of bacterial infections, specifically *C. difficile* infections.